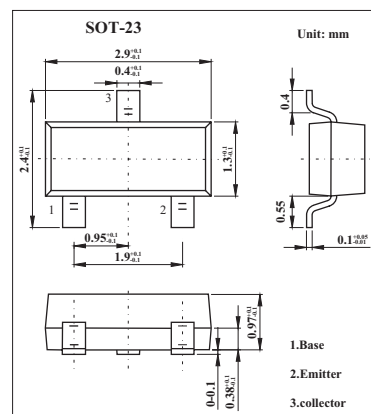


NPN Silicon Epitaxia

2SD2230

■ Features

- High h_{FE} and high current.
- Low $V_{CE(sat)}$.

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	16	V
Collector-emitter voltage	V_{CE0}	16	V
Emitter-base voltage	V_{EB0}	5	V
Collector current(dc)	I_D	500	mA
Total power dissipation	P_T	200	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 16\text{ V}, I_E = 0$			100	nA
Emitter cutoff current	I_{EBO}	$V_{EB} = 6.0\text{ V}, I_C = 0$			100	nA
DC current gain *	$h_{FE} 1$	$V_{CE} = 1.0\text{ V}, I_C = 100\text{ mA}$	200			
	$h_{FE} 2$	$V_{CE} = 1.0\text{ V}, I_C = 500\text{ mA}$	200			
Base to emitter voltage *	V_{BE}	$V_{CE} = 1.0\text{ V}, I_C = 10\text{ mA}$	550		700	mV
Collector saturation voltage	$V_{CE(sat) 1}$	$I_C = 100\text{ mA}, I_B = 10\text{ mA}$		33	50	mV
	$V_{CE(sat) 2}$	$I_C = 500\text{ mA}, I_B = 20\text{ mA}$		150	200	mV
Output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1.0\text{ MHz}$			15	pF
Gain bandwidth product	f_T	$V_{CE} = 1.0\text{ V}, I_E = -100\text{ mA}$	50			MHz

* Pulsed: $PW \leq 350\text{ }\mu\text{s}$, duty cycle $\leq 2\%$

■ Marking

Marking	D46
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